



# The Military Missions and Means Framework (MMF)

**Dr. Paul H. Deitz, Technical Director** **Mr. Jack H. Sheehan, PM**  
**Knowledge Intgr**  
**Army Materiel Systems Analysis Activity DoD DOT&E/C3I & Strategic**  
**Systems**  
**COL(R) Bruce A. Harris, Dir Trng & Perf** **Mr. Alexander B. H**  
**bphd@amsaa.army.mil; 410-278-6598** **Jack.Sheehan@osd.mil; 703-998-**  
**0600 x448** **Wong, Ofc of Tech Dir**  
**Dynamics Research Corporation** **Army Materiel Systems Analysis**  
**Activity**  
**bharris@drc.com; 978-473-9095 x1878** **awong@amsaa.army.mil; 410-**  
**278-6598** **Dynamics Research Corporation**  
**bbray@drc.com; 913-758-0514**

## December 2003

**Presented at the Interservice/Industry Training, Simulation and Education Conference (I/ITSEC), Orlando, FL, December 2003.**

# Purpose

**Provide information on the Missions and Means Framework for warfare representation.**

# Agenda

- **Purpose**
- **Overview of the MMF**
- **Application of the MMF**
- **Transformation Support**

# MMF Overview

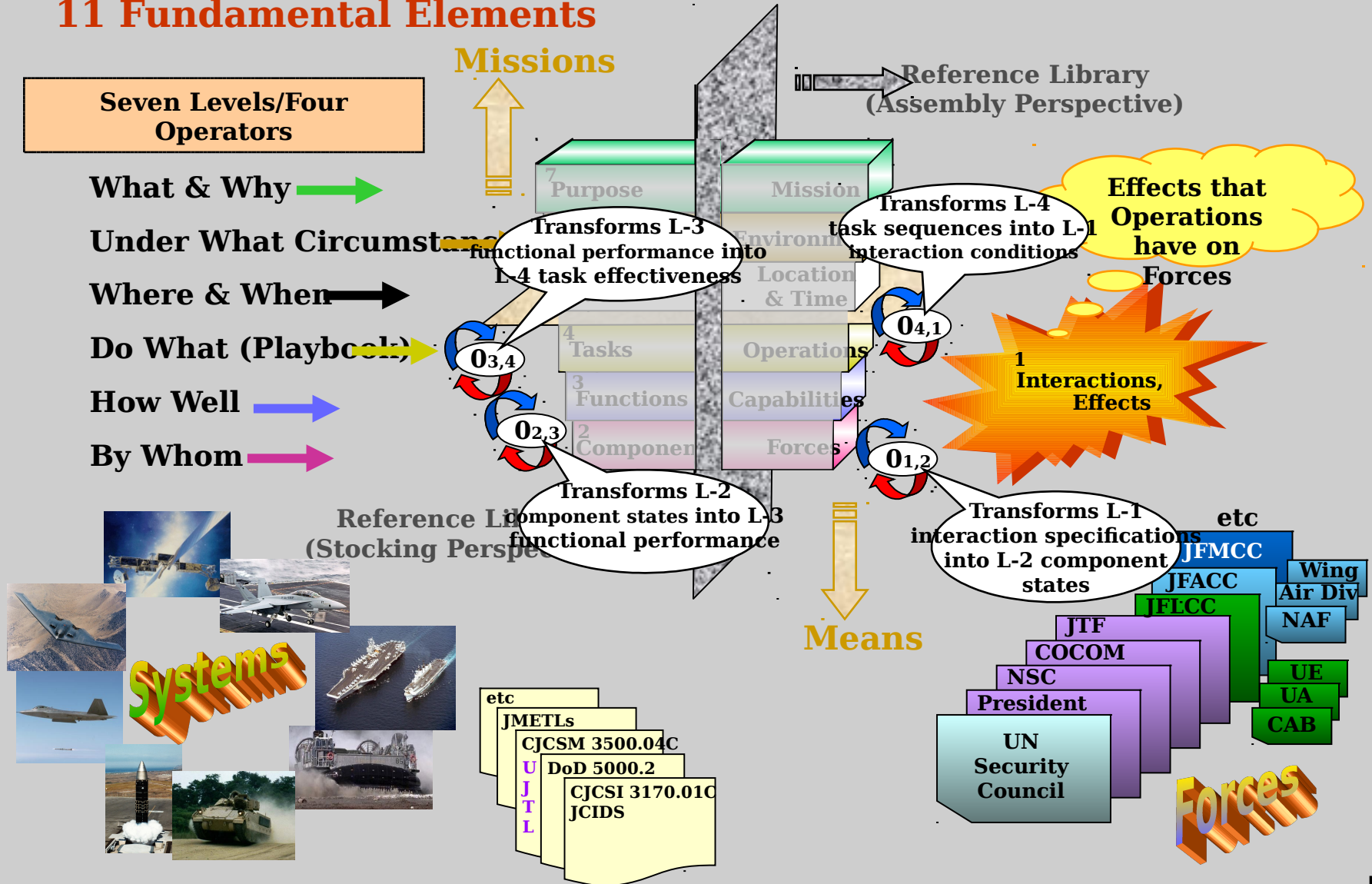
**Purpose:** Provide a framework for explicitly specifying the military mission and quantitatively evaluating the mission utility of alternative warfighting Doctrine, Organization, Training, Materiel, Leadership, Personnel, and Facilities (DOTMLPF) services and products.

**Objective:** Provide a disciplined procedure to explicitly specify the mission, allocate means, and assess mission accomplishment by:

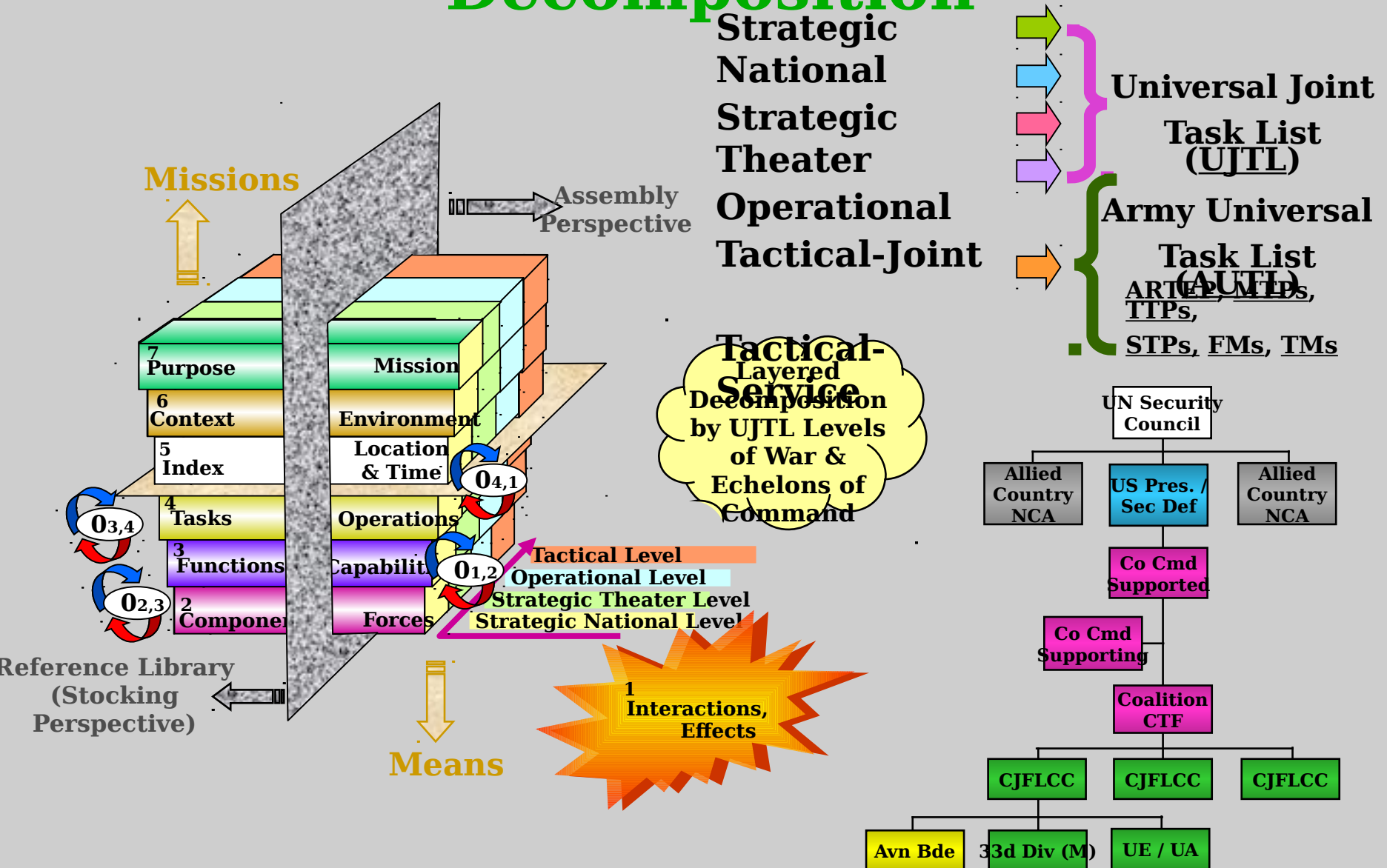
- Unifying the warfighter, engineer, and comptroller understanding of missions and means.
- Accounting for traditional testing and evaluation factors and traditional warfighter expertise factors that constitute mission success.
- Being sufficiently credible, timely, and affordable to make hard decisions that stay made.
- Being consistent, concise, repeatable, and scalable.
- Providing a disciplined process to implement the Defense

# MMF Overview - The Framework

## 11 Fundamental Elements



# MMF Overview - Layered Decomposition



# MMF Application - Situation

## Road to War

- Legitimate, pro-Western Government of Orangeland is overthrown by radical elements and forced into exile.
- Radical elements form new government, seek to force recognition by UN as legitimate government.
- Majority of Orangeland's conventional military forces are loyal to new government. Orangeland invades neighboring country of Blueland.
- United States and its coalition partners believe national interests and regional stability are threatened. They take military action to drive Orangeland forces from Blueland; remove rebel government from power; restore legitimate, pro-Western government; stabilize region; and protect U.S. and coalition vital interests.
- Coalition forces have commenced offensive ground operations in the region to drive Orangeland forces out of Blueland and continue attacking to isolate rebel government leadership inside capital of Orangeland.

## Current Situation

## Mission

- CJFLCC intends to isolate rebel government leadership in the capital by defeating majority of conventional forces well outside the capital and preventing them from reinforcing security forces protecting the rebel leadership inside the capital.

# MMF Application - Key Tasks

**Operational  
to Tactical:  
Nested Tasks**

**JTF**

1. **Restore legitimate government**
2. **Achieve air superiority**
3. **Destroy WMD capability**
4. **Facilitate control of energy centers**

**JFLCC**

1. **Secure capital region in Orangeland**
2. **Destroy WMD capability**
3. **Secure key oil and gas pipelines and prod facilities**
4. **Defeat rebel forces**

**UE**

1. **Attack to defeat rebel forces in zone**
2. **Conduct vertical maneuver to disrupt rebel forces**
3. **Secure key facilities**

**UA1**

1. **Secure key terrain vic OBJ CAMEL**
2. **Block enemy reinforcements from reaching capital**

**CAB2**

1. **Secure OBJ CAMEL in order to facilitate UA2 attack on OBJ BAT**
2. **Attack to defeat rebel forces attempting to return to capital**



(SN) 4 Restore legitimate government in order to 7 Protect national  
 (ST) 4 Establish military and civil conditions to 7 Restore legitimate  
 (OP) 4 Isolate rebel government to 7 Help establish desired conditio  
 (TA-Joint) 4 Prevent reinforcement of capital to 7 Help isolate rebel  
 (TA-Service) 4 Block access on main route into capital to 7 Prevent  
 of capital

(SN) 4 Deter use of force in order to 7 Ensure survival of regime  
 (ST) 4 Establish military, civil and political conditions to 7 Deter use  
 (OP) 4 Conduct synchronous ops to 7 Help establish desired conditi  
 (TA-Joint) 4 Pre-position forces in key areas to 7 Enable synchronou  
 (TA-Service) 4 Occupy defensive positions to 7 Prevent enemy acce

(SN) SN 3 Employ forces, SN 5.2.4 Decide on need for military action  
 (ST) ST 1.3.6 Conduct Ops in depth  
 (OP) OP 1.2.5 Conduct offensive operations  
 (TA-Joint) ART 8.1.2 Conduct an attack  
 (TA-Service) ART 8.5.25 Seize an area (Objective)

(SN) SN 3 Employ forces, SN 5.2.4 Decide on need for military action  
 (ST) ST 1.3.6 Conduct Ops in depth  
 (OP) OP 1.2.6 Conduct defensive operations  
 (TA-Joint) ART 8.2.1 Conduct an area defense  
 (TA-Service) ART 2.5.3 Establish a defensive position

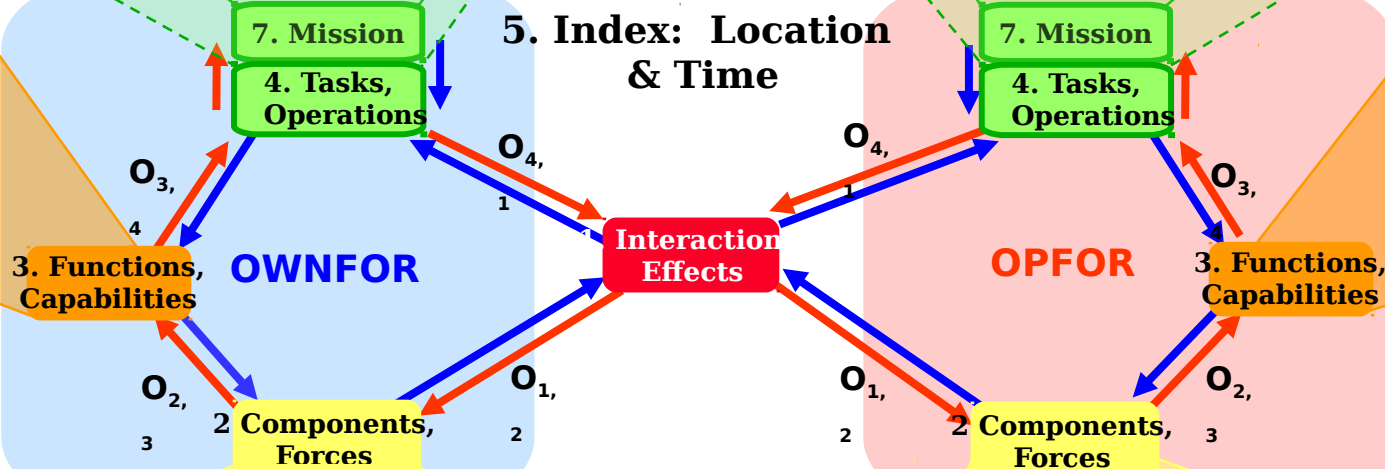
## 6. Context, Environment (Physical, Military, Civil, etc.)

### 7. OWNFOR Why = Purpose, Mission

### 7. OPFOR Why = Purpose, Mission

Move, Sense,  
Communicate,  
Engage, Restore  
  
Observe, Orient,  
Decide, Act

Move, Sense,  
Communicate,  
Engage, Restore  
  
Observe, Orient,  
Decide, Act



SN: National Intel/Communications assets  
 ST: Joint Task Force  
 OP: Air, Ground, Maritime, SOF components  
 TA-Joint: FCS equipped Unit of Action (UA)  
 TA-Service: Combined Arms Battalion (CAB)

SN/ST: WMD, SOF forces  
 OP: Missile units, elite division w/ newer equipment  
 TA-Joint: Conventional brigades w/ old equipment  
 TA-Service: Infantry battalions w/ old equipment

Synthesis

Employment

# Relating Effects to Utility

**JTF  
Commander  
Strategic/Operational**

**Establish conditions for restoration of  
legitimate Pro-Western Government**

**JFLCC  
Operational**

**Isolate capital**

**UE  
Operational/Tactical**

**Secure Objectives vicinity of capital (Surround)  
Defeat conventional opposing forces**

**UA  
Tactical**

**Prevent rebel forces from returning  
to the capital**

**CAB  
Tactical**

**Seize OBJ Camel in order to prevent rebel forces from  
crossing bridge**



# Relating Effects to Utility

## Desired Conditions

### Strategic MoEs:

- Legitimate government restored to power
- Territorial security of Orangeland ensured

### Operational MoEs:

- Enemy conventional capabilities defeated
- Leadership in capital isolated

### Tactical MoEs:

- Security forces inside capital defeated
- Capital surrounded

### Attack MoE:

- Conventional military forces blocked from reentering capital

## Not Desired Conditions

### Strategic MoEs:

- Rebel government maintains claim to power from an undisclosed location
- Rebel leaders play up “unprovoked” West attack and gain support for their government through

### Operational MoEs:

- Capital Defense Corps Security Forces are able to secure rebel leaders and get them out of the capital

### Tactical MoEs:

- Conventional forces delay coalition forces from taking key objectives inside the capital and engaging Security Forces from the Capital Attack Results:

- Conventional forces successfully reenter capital before main effort can reach its objective

Successful

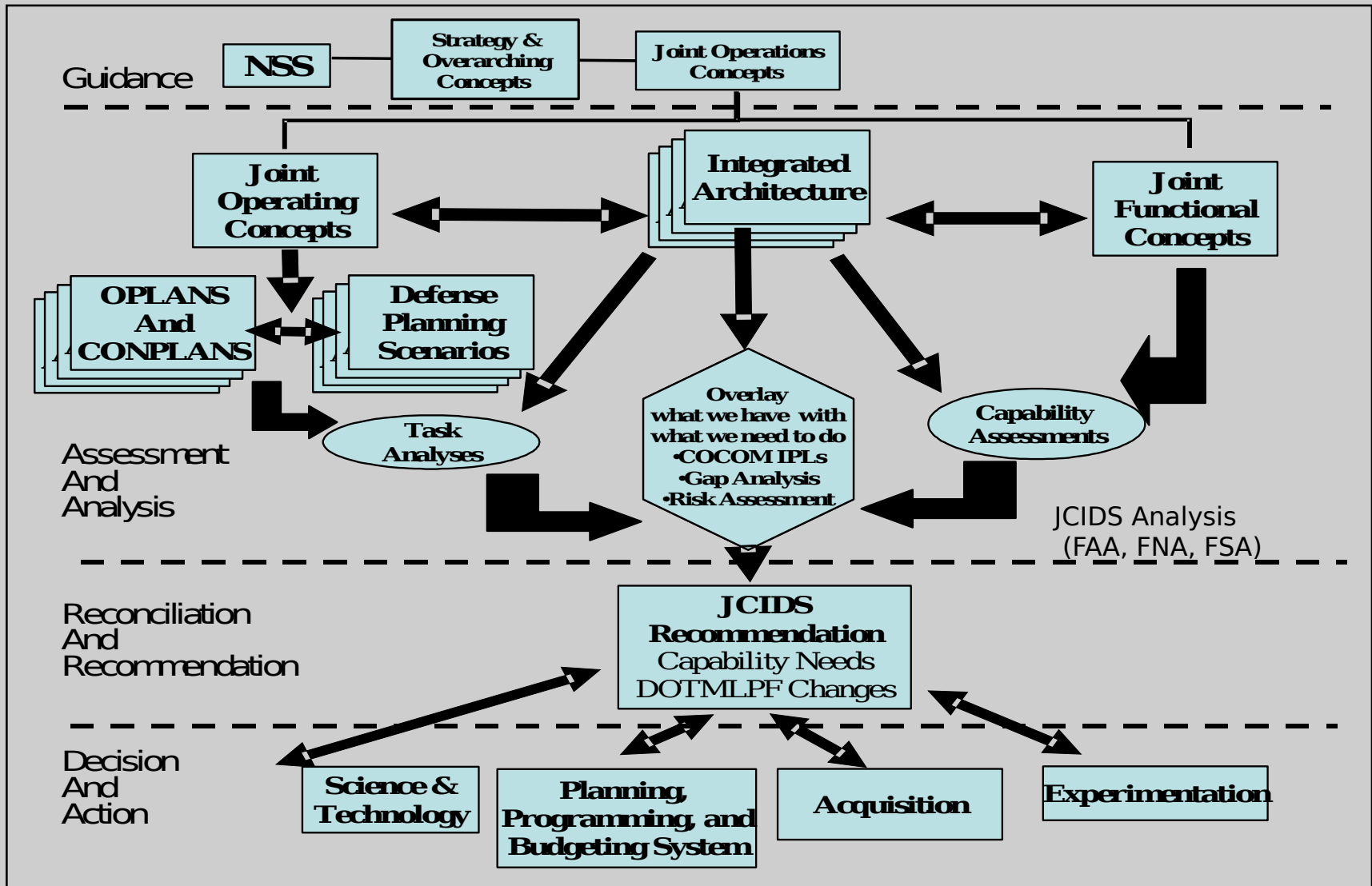
Unsuccessful

CAB2 Attack

Starting Conditions

# CJCSI 3170

## Signature Version



# The Military Missions and Means Framework (MMF)

**Dr. Paul H. Deitz, Technical Director**   **Mr. Jack H. Sheehan, PM**  
**Knowledge Intgr**  
**Army Materiel Systems Analysis Activity**   **DoD DOT&E/C3I & Strategic**  
**Systems**  
**COL(R) Bruce A. Harris, Dir Trng & Perf**   **Mr. Alexander B. H**  
**bphd@amsaa.army.mil; 410-278-6598**   **Jack.Sheehan@osd.mil; 703-998-**  
**0600 x448**  
**Dynamics Research Corporation**   **Army Materiel Systems Analysis**  
**Activity**  
**bharris@drc.com; 913-758-0514**   **awong@amsaa.army.mil; 410-**  
**278-6598**  
**Dynamics Research Corporation**  
**bbray@drc.com; 913-758-0514**

**December 2003**

**Presented at the Interservice/Industry Training, Simulation and Education Conference (I/ITSEC), Orlando, FL, December 2003.**

# **Back Up Slides**

# MMF Application

**Mission:** Answers the questions

What, When, Where and most importantly, Why

**Tasks:** Derived from the UJTL, Service Task Lists (AUTL, NTTL, AFTL) or Mission Training Plans (MTPs) and associated OPLANs or OPFOR. Includes conditions and standards.

**7. OWNFOR Purpose: Why**

Describes specific environmental and unit-specific conditions affecting OWNFOR force at point of interaction

Describes specific environmental and unit-specific conditions affecting OPFOR force at point of interaction

**Mission:** Answers the questions

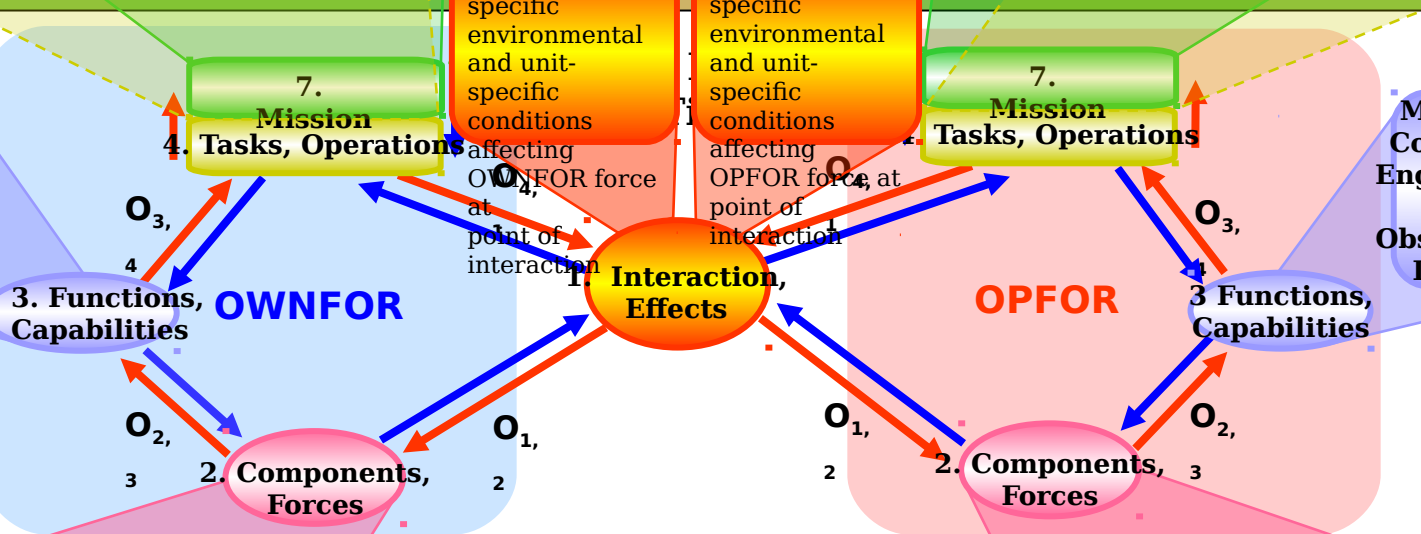
What, When, Where and most importantly, Why

**Tasks:** As identified by established OPFOR doctrine, TTPs and associated task lists

**7. OPFOR Purpose: why = MISSION**

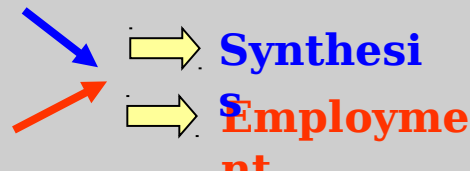
Move, Sense, Communicate, Engage, Restore  
Observe, Orient, Decide, Act

Move, Sense, Communicate, Engage, Restore  
Observe, Orient, Decide, Act



State of friendly units, personnel and equipment providing necessary capability to accomplish the selected operation

State of enemy units, personnel and equipment providing necessary capability to accomplish the selected operation



# Transformation Support

**Mission Definition:** JCIDS requires formal statement of national security strategy, strategy and overall concept for

MMF records this in the multi-sided (OWNFOR / OPFOR) specifications: L-7 Purpose/Mission referencing L-6 Context/Environment and L-5 Index/Location/Time

**Mission Analysis:** JCIDS terms FAA - JTS calls METL-based readiness requirements

MMF employs MDMP to derive specified / implied tasks, identify conditions, select measure, and assign standards

**Capability Assessment:** JCIDS requires a functional concepts decomposition (to do

MMF employs O3,4S synthesis operator to derive “catholically agnostic” decomposition of L-3 Functions/Capabilities based on L-4 Tasks/Operations

**Integrated Architectures:** JCIDS / DoD 5000.2 require integrated Operational, Systems, and Technical standards

MMF employs integrated architectures to provide concepts, rules, and technologies to assemble Stocking Perspective parts into Assembly Perspective packages

**Mission Evaluation:** JCIDS requires an FSA to determine degree to which alternative DOTMLPF solutions do / do

MMF conducts FSA as follows:

- O1,2E Employment operator provides the degraded (or enhanced) states generated by L-1 Effects packages on L-2  
Component parts
- O2,3E Employment operator uses architectures to determine L-3 Capability package performance based on L-2  
Component part states and appropriate architecture rules and constraints



# CJSCM 3400-04C, Universal Joint Task List, 1 July 2002

“Serves as a **common language** and **common reference system** for joint force **commanders**, combat support agencies, **operational planners**, **combat developers** and **trainers** to **communicate mission requirements**. It is the basic language for the development of a joint mission essential task list (JMETL) or agency mission essential task list (AMETL) that **identifies required capabilities** for mission success. “The UJTL is a key element of the requirements based “mission to task” Joint Training System. In implementing this system all users conduct mission analysis, identify specified and implied tasks, **use the UJTL to describe these tasks**, apply guidance to determine essential tasks, **select conditions that impact the tasks and select measures and criteria that form the basis for standards**. They document these tasks, conditions and standards as their **warfighting requirements** in a JMETL/AMETL”.

# A Two-Sided Missions & Means Framework

**Mission:** Answers the questions

What, When, Where and most importantly, Why

**Tasks:** Derived from the UJTL, Service Task Lists (AUTL, NTTL, AFTL) or Mission Training Plans (MTPs) and associated OPLANs or OPORDs. Includes conditions and standards.

**Mission:** Answers the questions

What, When, Where and most importantly, Why

**Tasks:** As identified by established OPFOR doctrine, TTPs and associated task lists

7. BlueFor Purpose: Why = Mission

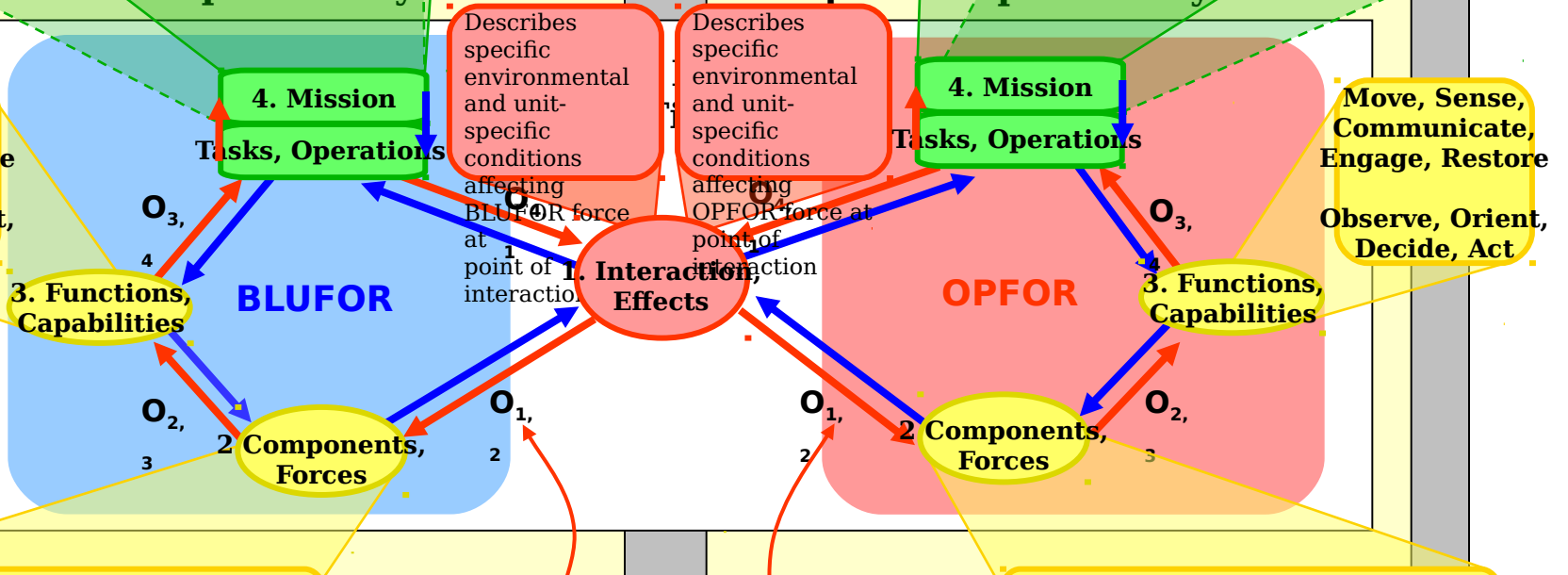
7. OpFor Purpose: Why = Mission

Move, Sense, Communicate, Engage, Restore

Move, Sense, Communicate, Engage, Restore

Observe, Orient, Decide, Act

Observe, Orient, Decide, Act



State of friendly units, personnel and equipment providing necessary capability to accomplish the selected operation

State of enemy units, personnel and equipment providing necessary capability to accomplish the selected operation

Any action that creates a state change on an BLUEFOR platform, system or SOS

Any action that creates a state change on an OPFOR platform, system or SOS

# A Two-Sided Missions & Means Framework

Receive the Mission

Synthesis  
is

Cdr's Intent

Road to War

IPB Limits  
& Constraints

6. Context: Environment (Physical, Civil, Military, etc.)

7. BlueFor Purpose: Why = Mission

7. OpFor Purpose: Why = Mission

Msn Analysis:  
Specified  
Implied  
Essential Tasks

5. Index: Location  
& Time

3. Capabilities

BLUFOR

2. Components

1. Interaction  
Conditions

OPFOR

3. Capabilities

2. Components

Task Organization  
/ Req. for Spt

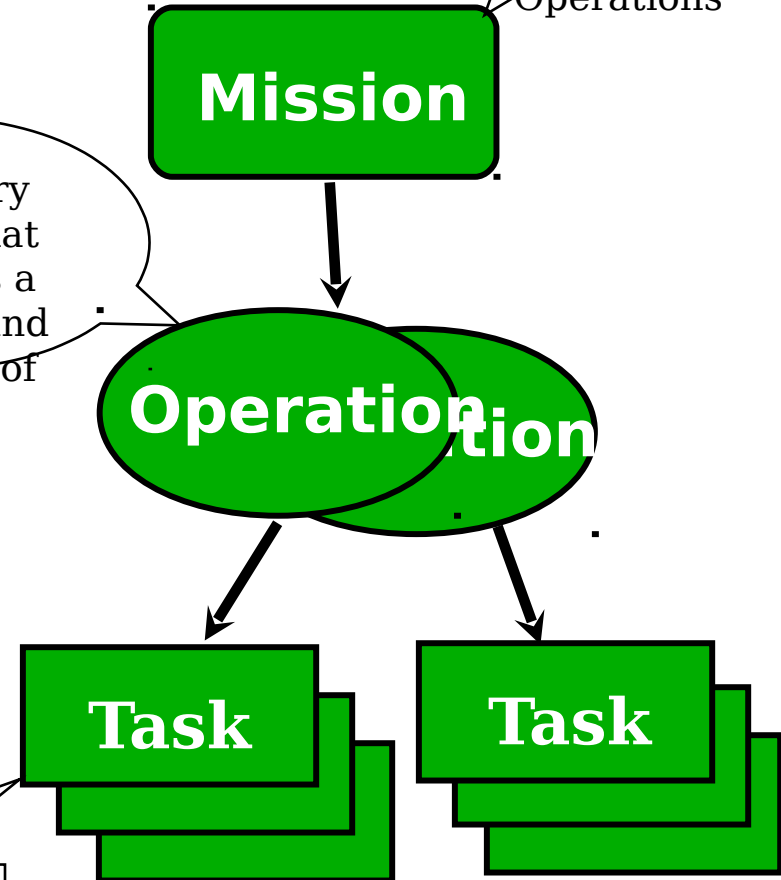
# Conduct Joint Mission Analysis

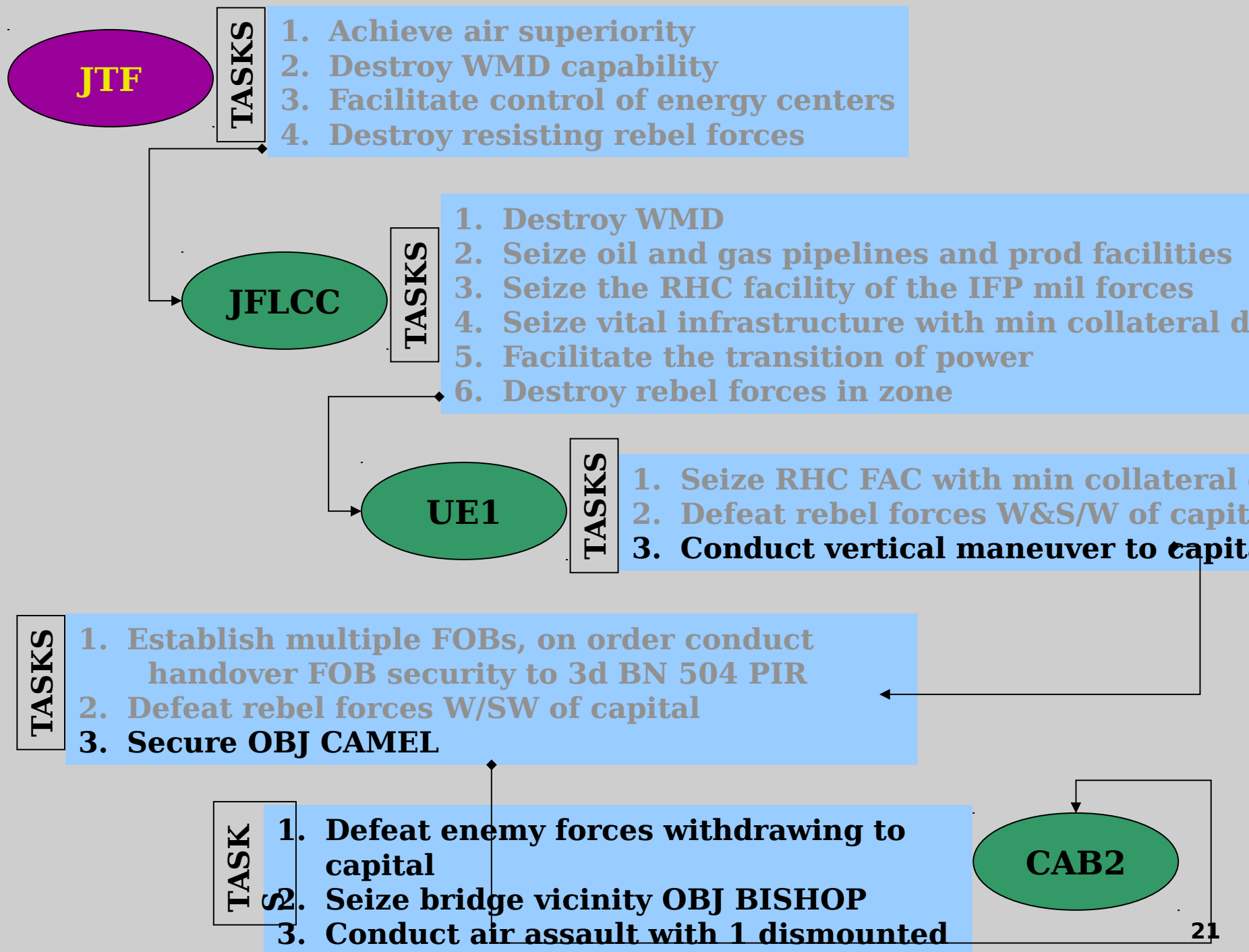
- **Mission** is assigned to Commander. Concept of operations may include a number of operations.
- **Operations**, the building blocks of mission planning, are comprised of multiple tasks.
- **Tasks** are the fundamental building blocks of missions, and are executed by specific units or organizations.

Discrete event/action executed to accomplish a mission or operation

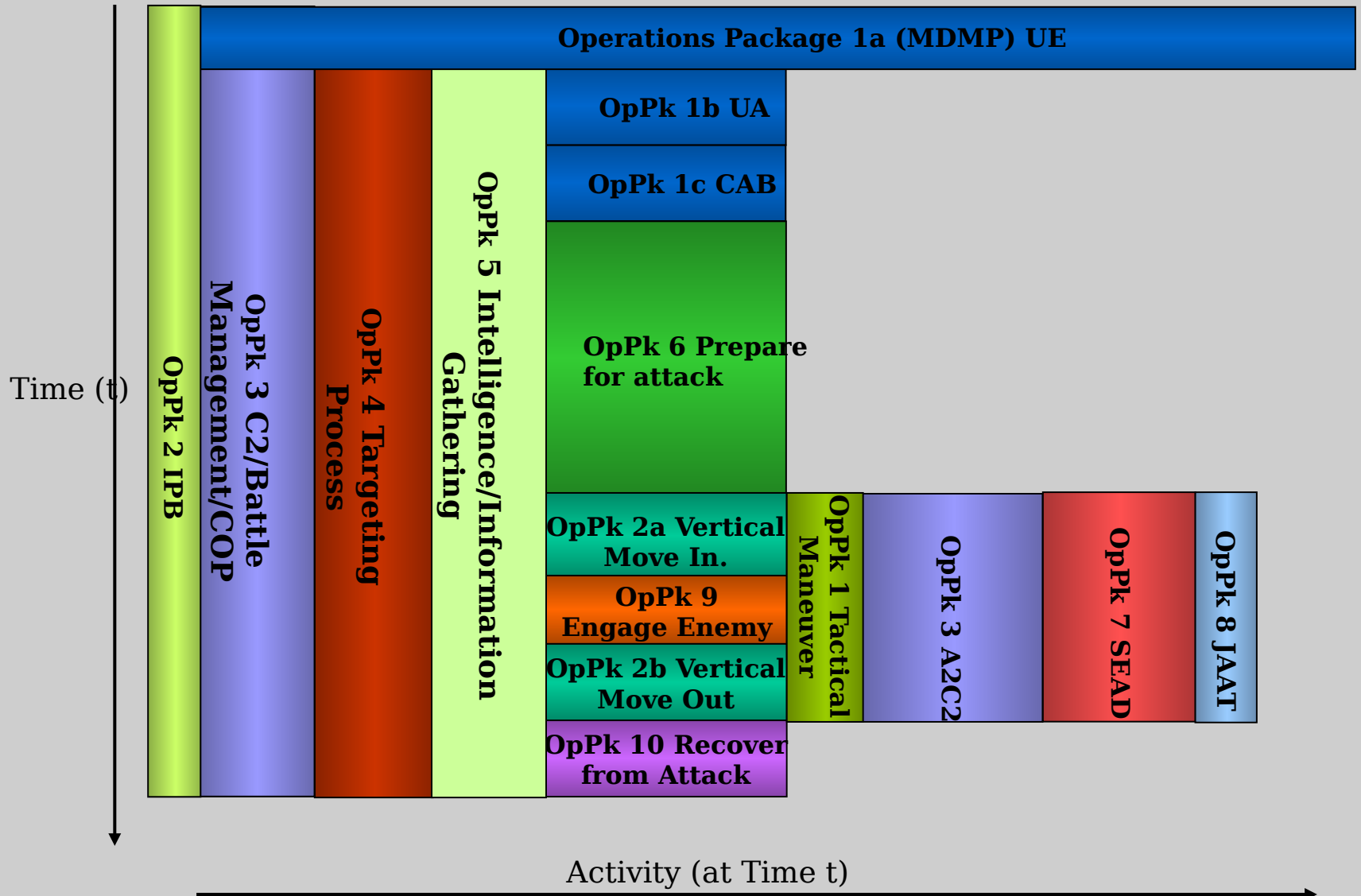
A military action that supports a mission and consists of tasks

An assignment with a purpose and it consists of Operations





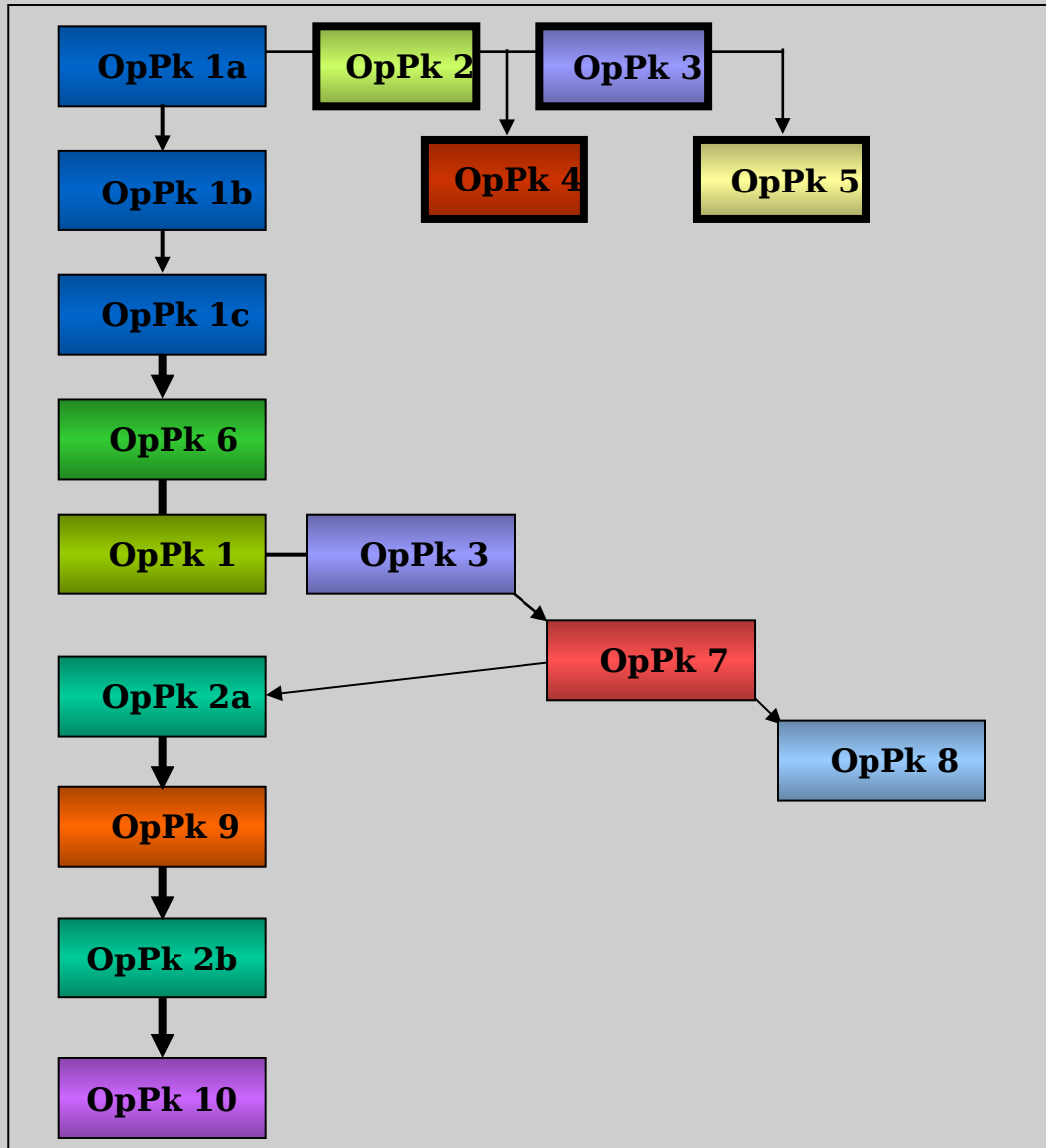
# Attack Operations Package



# Operations Package 3 (C2/Battle Management)

MoE: Attack planning, coordination and execution is not adversely affected by inaccurate or outdated information concerning environmental conditions, friendly unit location and status or reported enemy activity, location, strength and intentions. (Y/N)					
Sequence #	Task #	Task Title	MoP	Unit	
3.8	ART 7.3.2.3	Conduct risk management	1) No offensive tasks executed that exceed maximum residual risk established by commander. 2) No casualties as a result of failure to manage risk.	All	
3.9	ART 7.6.3	Make adjustments to resources, concept of ops or mission	Adjustments made to exploit opportunities or resolve problems occurring during execution effectively. (Y/N)	Commander	
3.10a	ART 7.5.4	Revise and refine the plan	Revision and refinements to the plan completed in less than one third of time	Commander and Staff	
3.10b	ART 7.6.1.2	Adjust graphic control measures	1) Adjust before of graphic control measures accurately reflected changes in METT-TC (w/in 100 meters). 2) Lag time between operations and adjustment of graphic control measures (<5 minutes).	Operations and Intel Cell	

# Attack Operations Package Sequence



- Start Operations Package 1a first.
- OpPk 2 and OpPk 3 are continuous and feed into OpPk 1a, b, and c
- OpPk 1b, 4 and 5 begin during OpPk 1a.
- OpPk's 4, and 5 are continuous. OpPk 1c begins during OpPk 1b.
- OpPk 6 follows OpPk 1c.
- OpPk 1 and OpPk 3 begin when OpPk 6 ends and end when OpPk 10 begins.
- OpPk 7 begins after OpPk 1 begins and before OpPk 2a begins and ends when OpPk 2b ends.
- OpPk 2a and OpPk 8 begin during OpPk 7.
- OpPk 9 begins after OpPk 2a.

**MoE: Country of Interest conventional military forces prevented from re-entering capital and interfering with main effort.**